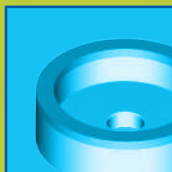




DIAMETAL

Success with precision



pd© " µd

|

m

Bonded precision grinding tools in
Diamond and CBN





CBN	w
d	x
	dd
	dd }
(Vs)	uv
	uw
d q d	ux
d©" μd d	uy
d	u
d dsd d	u }
d d	ddv tqvu
d	ddvvqyw
d	dyx
d	dyy
DIAMETAL d	dyz

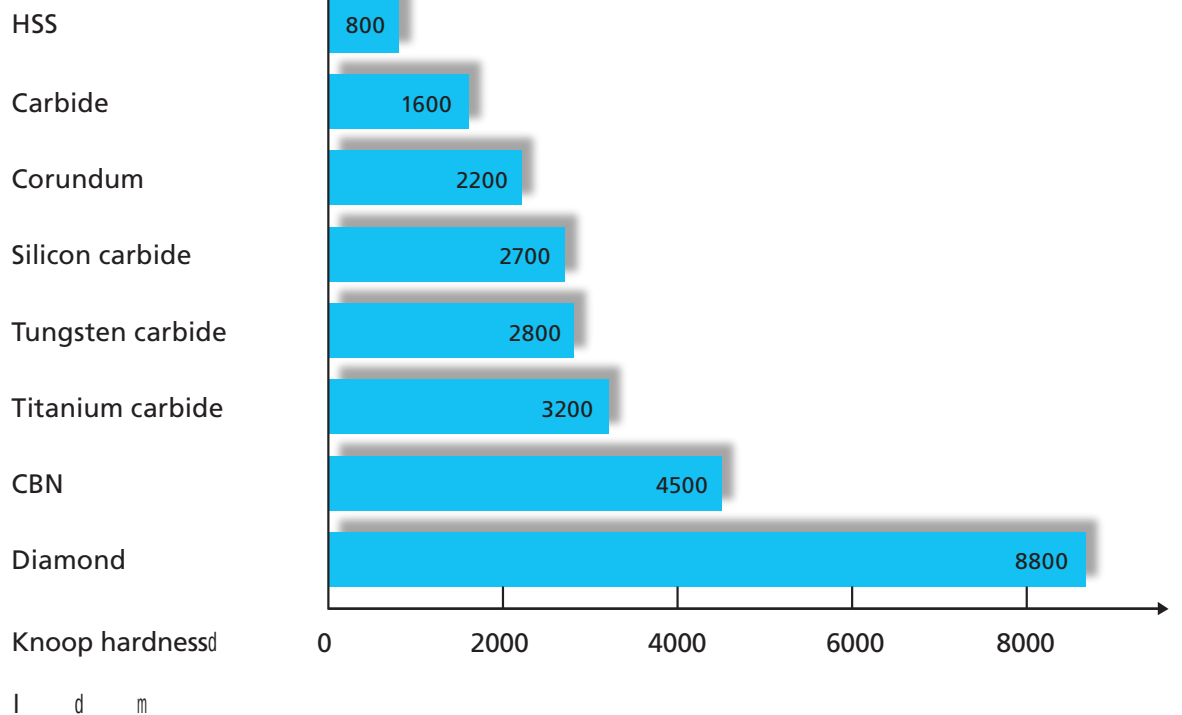
Contents

Diamond and CBN	dw
Abrasive qualities	dx
Concentration	d
Bonds	d }
Cutting speeds (Vs)	uv
Cooling	uw
Wheel body - the base material of a grinding wheel	ux
Conditioning of Diamond and CBN grinding wheels	uy
Grinding characteristics	u
Wheel description Order details	u }
Overview of shapes	ddv tqvu
Standard types with gauges	ddvvqyw
Special grinding tools	dyx
Questionnaire	dyy
Overview of DIAMETAL catalogues	dyz



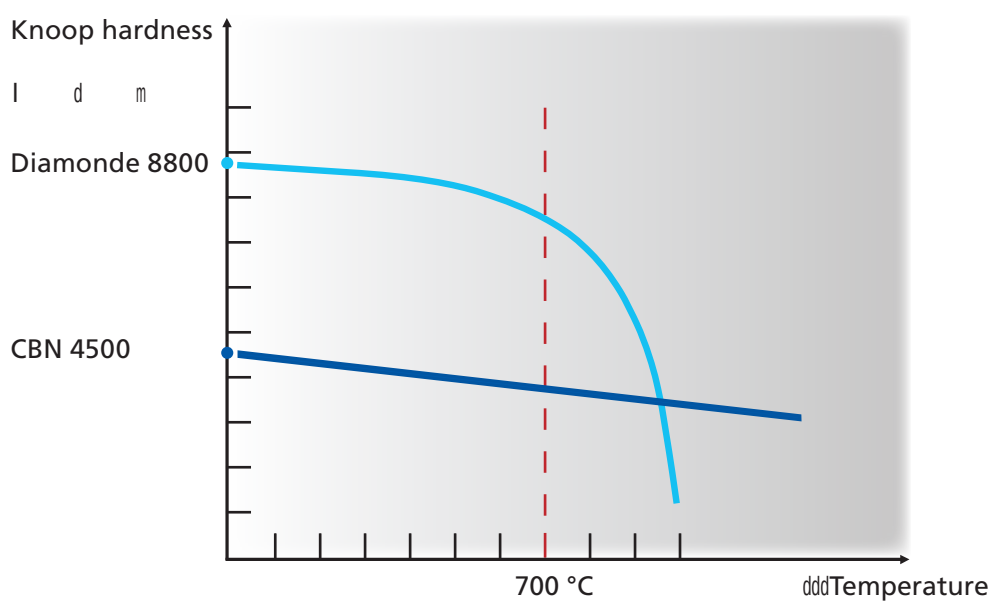
CBN

Comparison of hardness of different materials



Diamond

Comparison of hardness of different materials

[illegible][illegible]

d d d d d d rd d d
 d d d d d d pd d d r
 d d , .
 d d d d d d pd d d d
 d I ß Ö Ü Î d Î ß Ö Ë Ö Î m d I ß Ö Ü Î d Î ß Ö Ë Ö Î m d d r
 d d d d d rd d d d
 d - (cross-grinding,)
 d d d d I m

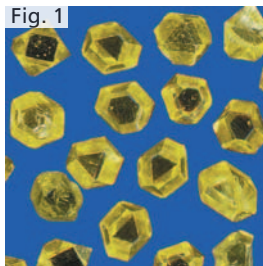
dCBNd pd d pd pd d-d K20/HSSd HRC 64								
FEPA D	d CBN		D	d Ra CBN	ddddd	N	d	
	B 301			2.100		N8	Roughing	dl m
	B 251			1.770		N8	Roughing	
	B 213			1.410		N7	Roughing	
	B 181			1.120		N7	Roughing	
	B 151			0.750		N6	Roughing	
	B 126			0.660		N6	Roughing	
D 181	B 107		0.530	0.530		N6	Coarse grinding	d d
D 151	B 91		0.500	0.500		N6	Coarse grinding	
D 126	B 76		0.450	0.450		N6	Coarse grinding	
D 107	B 64		0.400	0.400		N5	Pregrinding	d
D 91	B 54		0.330	0.330		N5	Pregrinding	
D 76	B 46		0.250	0.250		N5	Pregrinding	
D 64			0.180			N4	Fine grinding	d pd
D 54			0.160			N4	Fine grinding	
D 46			0.150			N4	Fine grinding	
MD 25			0.120			N3	Ultrafine grinding	l
MD 20			0.050			N2	Ultrafine grinding	ddd m
MD 10			0.025			N1	Ultrafine grinding	

	N1	N2	N3	N4	N5	N6	N7	N8
Ra (µm)	0.025	0.05	0.10	0.2	0.4	0.8	1.60	3.20
Rt (µm)	0.500	0.80	1.25	2.5	5.0	8.0	16.0	32.0
Rz (µm)	0.400	0.63	1.00	2.0	4.0	6.3	10.0	16.0

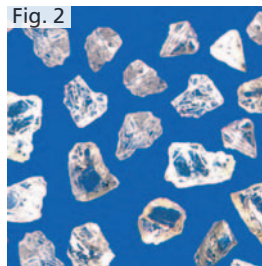
$$: R_{\max.}(S) = R_a \times 4$$

■ d-d
 d I · ß Ö × Î ß Ö Ë Ö Î d pd pd pd q s Ë Ü Î × d Î ß Ö Î pd m d
 d pd d d d dvâw d d d d
 d rd

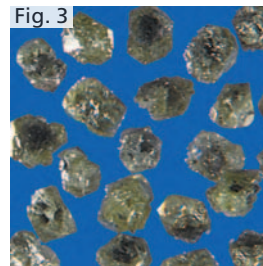
Grit shape / structure / finishing (coating)
 Round, block-shaped monocrystals
 Oblong, splinter-shaped grit, monocrystals
 Polycrystalline grit
 Finished grit / coating



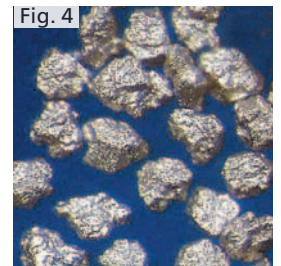
Round, block-shaped monocrystals



Oblong, splinter-shaped grit, monocrystals

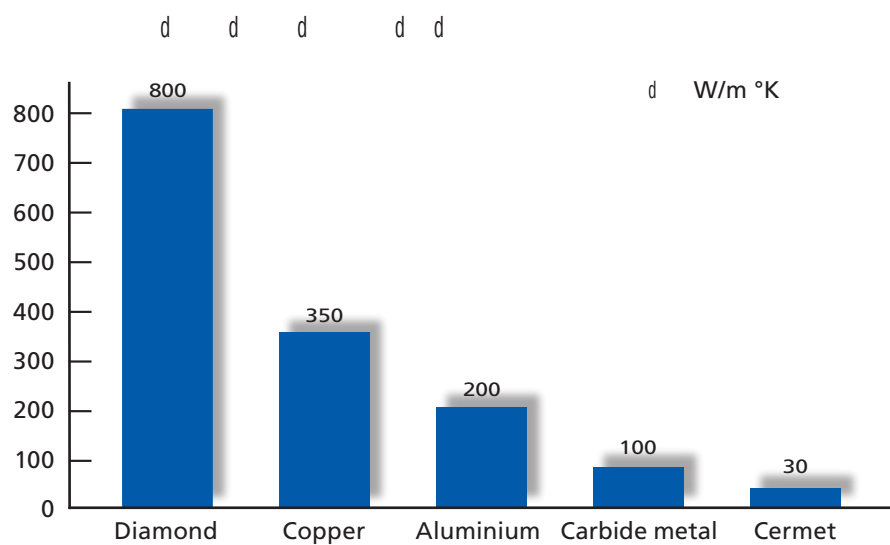


Polycrystalline grit



Finished grit / coating

Thermal conductivity (W/m °K)
 Diamond: 800
 Copper: 350
 Aluminium: 200
 Carbide metal: 100
 Cermets: 30



DIAMETAL

d rd

d

d

가

Concentration

(1 carat = 0.2g)

CBN

(grinding rim)-

FEPA

"100" CBNd"240

V"

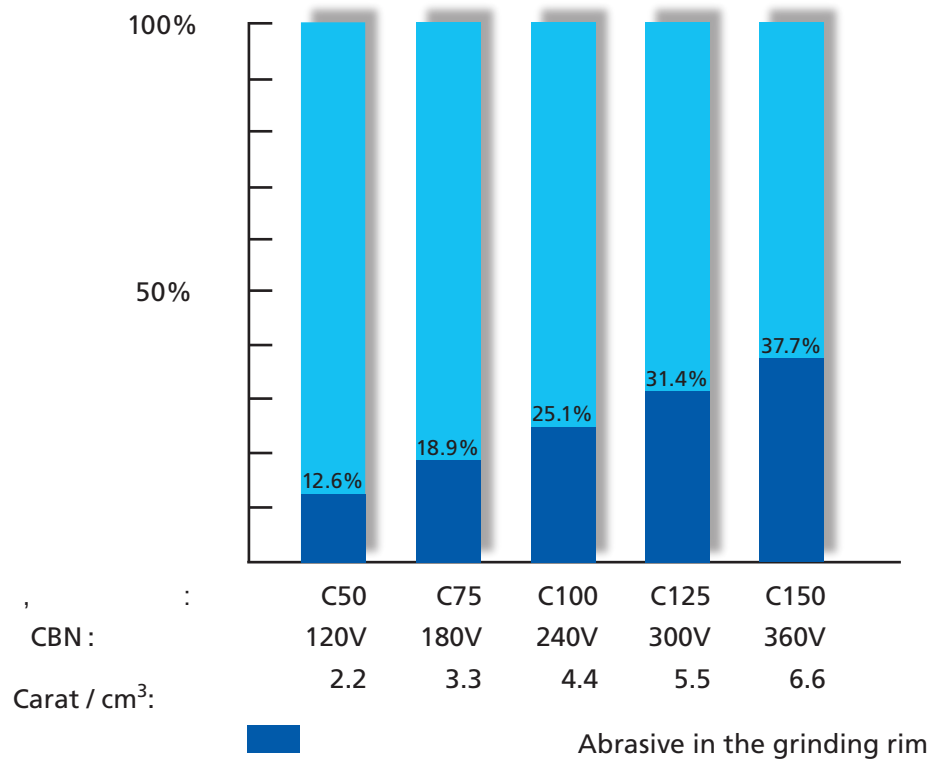
- 1

4.4

가

가

Concentrations



■ (, Bonds)

가

가

DIAMETAL

- (Resin bonds) B
- (Metal bonds) M
- V (VC / V2)
- V
- (, Electroplated bonds) G

Resin	↑	→	→	→	↑
Metal	→	↑	↑	↑	→
	↑	→	↑	↓	↑
-	→	↑	↑	↓	↓

↑ = (excellent) → = (good) ↓ = (inadequate)

가

80가

, DIAMETAL

가

d dd

Resin bonds - "B"

(imide resins) .
250 350
, CBN .
가 . , ,
- ,
.

Metal bonds - "M"

가 .
600 .
, ,
(flute : , ,) .

Metal-vitrified bonds "MV" (VC for Diamond / V2 for CBN)

-
.
" " . 가 가 .
, - .
(600). - ,
, CBN- (purling) .

Vitrified bonds "V"

.
600 700 .
가 , 가 가
, ,
.

가 (CBN),

가 :

- 가
- (1 0.002mmm 0.01mm)
- 가
- 가

- ()
- PCD
- ()
- (Crushier wheels)
- (SiC, Silicon carbide wheels)
- MKD
- (Multigrit Diamonds)

"G" (, Electroplated bonds - "G")

" CBN "





6

”가

(

)

, “가

DIAMETAL

가

•

•

Recommended cutting speeds

■ :
30m/s , 가 . (15 “ ”)
() , 30% 50% .

DIAMETAL :

Vmax. 63 m/s

CBN: Vmax. 80 m/s

■ (, Cooling)

가

가

가

CBN

3

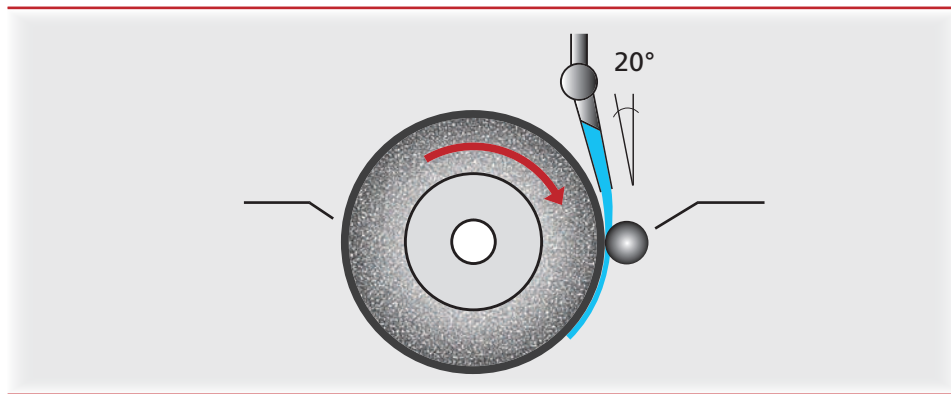
가

가

가

20°

가



(: 10mm

11mm)

(Vs)

(pk)

(Vs)

(pk)

pk		pk		Vs in m/s		pk (bar)	
				10	1	0.6	
				20	2	1.2	
				30	5	3.0	
				40	8	4.8	
				50	13	7.8	
				60	19	11.4	



, DIAMETAL 가

•

(CBN)가



CBN (Conditioning)

“ ” (sharpening) . ,
B, M - MV
12/13 “ ”

Dressing

, ()
B, M MV CBN

(silicon carbide)

/ CBN				(Silicon carbide wheel)	
D		CBN	/	(Hardness)	
D	301	B 301	36	M	
D	251	B 251	36	M	
D	213	B 213	60	K	
D	181	B 181	60	K	
D	151	B 151	60	K	
D	126	B 126	60	K	
D	107	B 107	120	H	
D	91	B 91	120	H	
D	76	B 76	220	H	
D	64	B 64	220	H	
D	54	B 54	220	H	
D	46	B 46	320	G	
MD	40	MB 40	320	G	
MD	25	MB 25	320	G	
MD	20		500	E	
MD	16	MB 16	500	E	
MD	10		500	E	
MD	6.3		600	E	
MD	4		600	E	
MD	2.5		800	E	

: silicon carbide wheels supplied by WST Winterthur Schleiftechnik

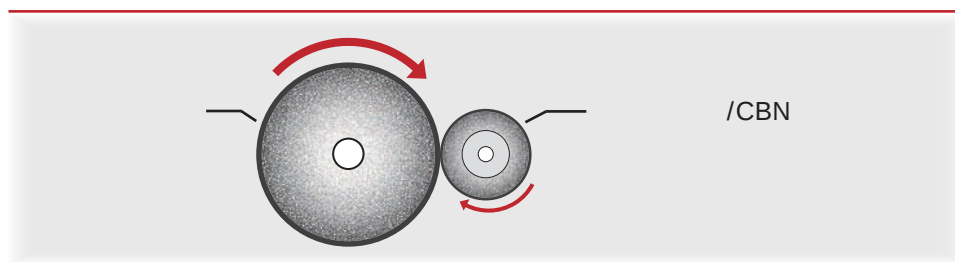
(:
)

- ()
 0.01mm (true running)
) - 가 CBN (320

DIAMETAL

:
 : 30 m/s
 /CBN : 1 m/s
 () : 0.02-0.05 mm
 : 0.01-0.02 mm

_____ 가 가



가

(SiC)

1/2

CBN

(pointed profile wheels)

1mm



1 CBN "G" CBN 0.025 0.03
 (SiC) , 30~40

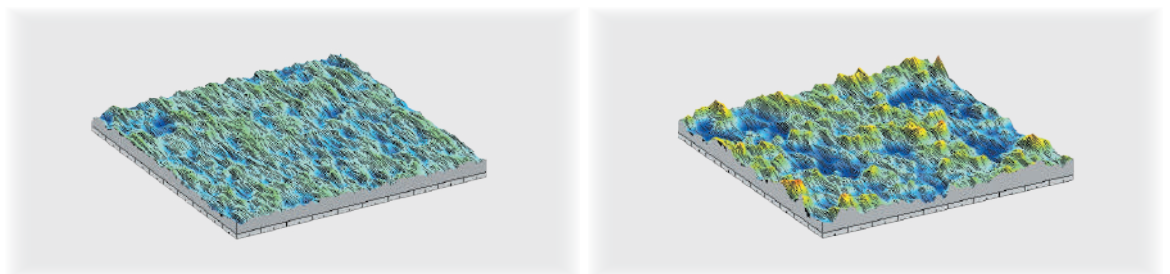
(, Sharpening)

가
가 “ ”
가
“ ()”
(Al2O3=
£
corundum) ()
J 320
()
() , DIAMETAL :

No. 1: (red) = D/B 301 - D/B 46
No. 2: (white) = MD/MB 40 - MD/MB1

■ Important:

(- 가 ,) (- ,)



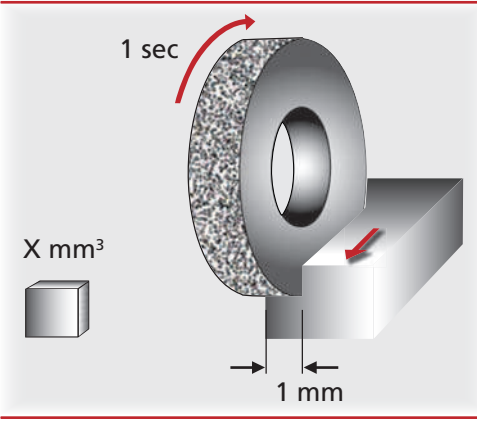
Grinding characteristics

가 .
 "G" , 가 .

- Specific time-machining volume Qw'

'Qw'
 -
 가
 가 . Qw'

Qw' = mm³ / mm / s



Qw' :

(deep grinding)

$$Qw' = \frac{ae \times Vt}{60}$$

- 가 (longitudinal grinding)

$$Qw' = \frac{ae \times Nw \times Dw \times \pi}{60}$$

- (plunge-cut grinding)

$$Qw' = \frac{Vf \times Dw \times \pi}{60}$$

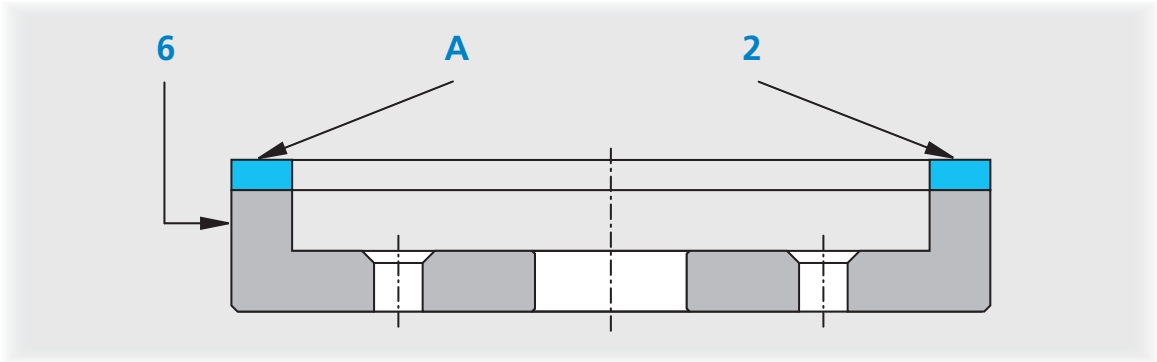
- : ae = [mm]
- Vt = [mm/min]
- Dw = [mm]
- Nw = [rpm]
- Vf = [mm/min]

G (value)

G . d d
 d , G
 가

G = $\frac{\text{mm}^3}{\text{mm}^3}$
 CBN G :

() : 50-300
 CBN(HSS,) : 150-800



6 =

1

A =

2

2 =

3

Order details

-

-

-

-

(

D

CBN

)

B

:

가

,

.

:

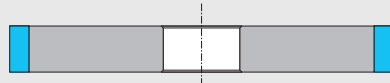
6A2	150	6	2	20	D	126	50	B5
					D/CBN			



/ Overview of shapes

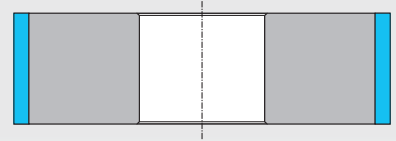
45 | 46

1 A 1



1 A 1

(Centerless)

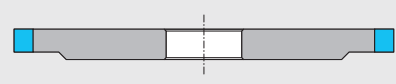


47 | 48

14 A 1

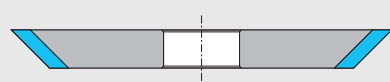


4 A 1

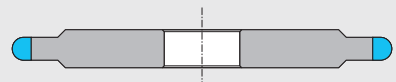


49 | 50

1 V 1



14 F 1

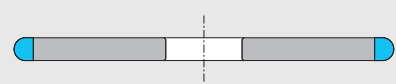


51 | 52

4 F 1

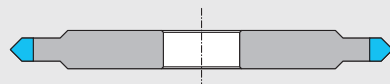


1 F 1



53 | 54

14 E 1

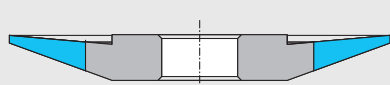


14 K 1



55 | 56

4 BT 9

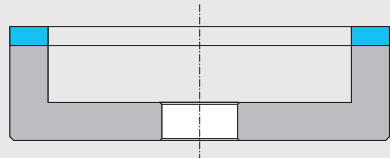


4 B 9

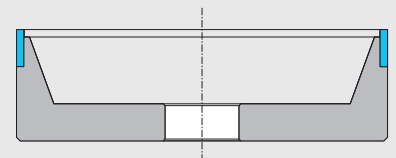


57 | 58

6 A 2

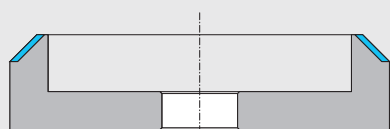


6 A 9

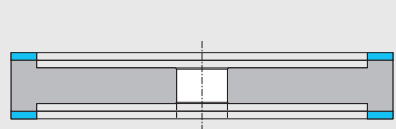


59 | 60

6 V 5



9 A 3

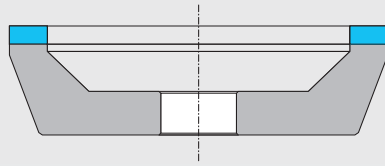




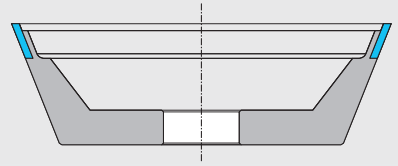
/ Overview of shapes

61 | 62

11 A 2

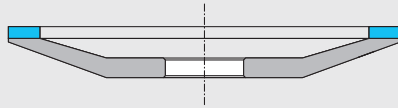


11 V 9

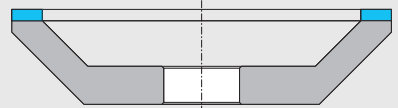


63 | 64

12 A 2 20°

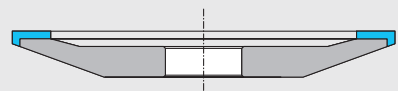


12 A 2 45°

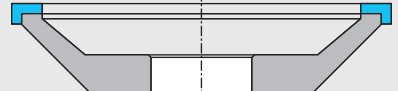


65 | 66

12 C 9 20°

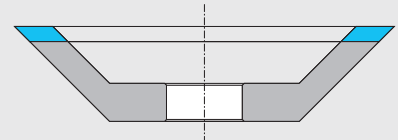


12 C 9 45°

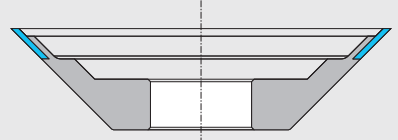


67 | 68

12 V 2 45°

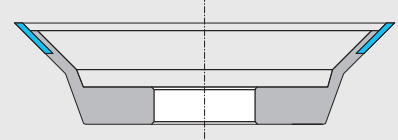


12 V 9 45°

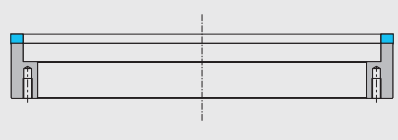


69 | 70

12 V 9 45°|70°



6 A 2 WSP

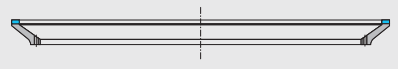


71 | 72

11 A 2 60°|70° WSP



12 A 2 45° WSP

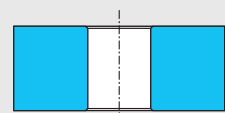


73 | 74

1 A 1 R

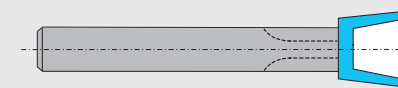


1 A 8

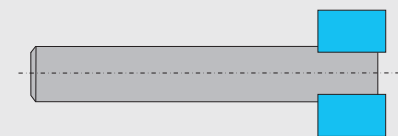


75 | 76

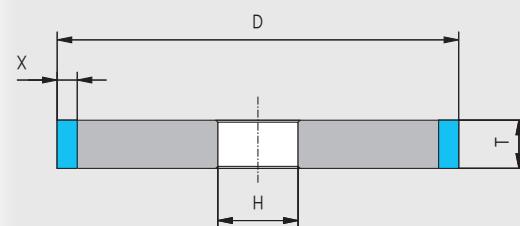
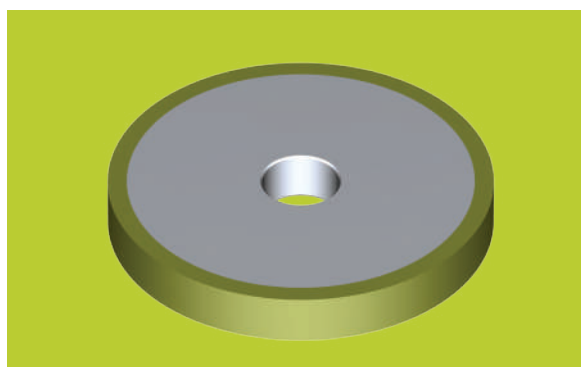
1 B 1 W



1 A 1 W



■ 1 A 1



D	T	X	H*
25	6 8 10	3	
30	6 8 10	3	
40	6 8 10	3	
50	6 8 10	3	
75	6 8 10 12	3 5	
100	6 8 10 12	3 5	
125	8 10 12	3 5	
150	10 12 15 20	3 5	
175	12 15 20	3 5	
200	15 20	3 5	
250	20	3 5	
300	20	3 5	
350	20	3 5	
400	20	3 5	
450	20 25	3 5	
500	/ on request		
550	/ on request		
600	/ on request		

H* = / specify when ordering

B

/ standard

M

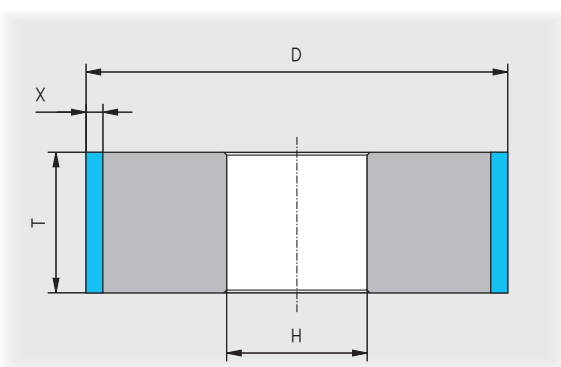
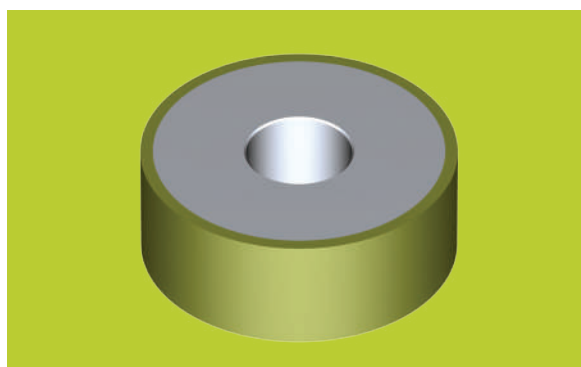
/ standard

MV

/ on request

V

/ on request



D	T	X	H*
150	acc. to customer specifications	3 5	
200		3 5	
250		3 5	
300		3 5	
350		3 5	
400		3 5	
450		3 5	
T 50 mm		=	-
T wider than 50 mm = Multi-rim wheels			

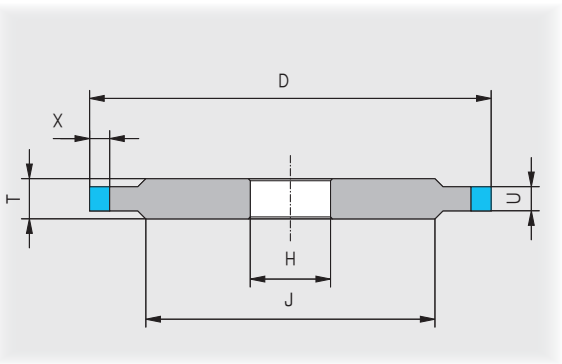
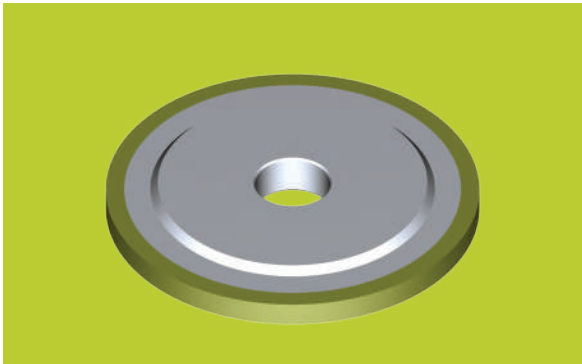
H* = / specify when ordering

■ :
, (plunge-cut)

■ **Important:**
Specify if sweep grinding or plunge-cut grinding

B	/ standard
M	/ on request
MV	/ on request
V	/ on request

■ 14 A 1



D	U	X	T	J	H*
75	2 3	3 5	6	55	
100	2 3	3 5	6	80	
125	2 3	3 5	8	105	
150	2 3	3 5	10	130	
175	2 3 4	3 5	12	155	
200	2 3 4	3 5	15	180	

H* = / specify when ordering

B

/ standard

M

/ standard

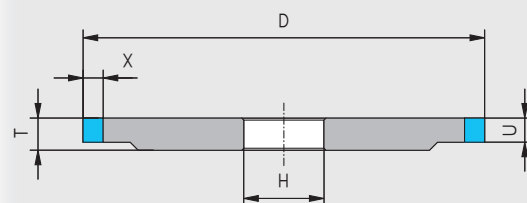
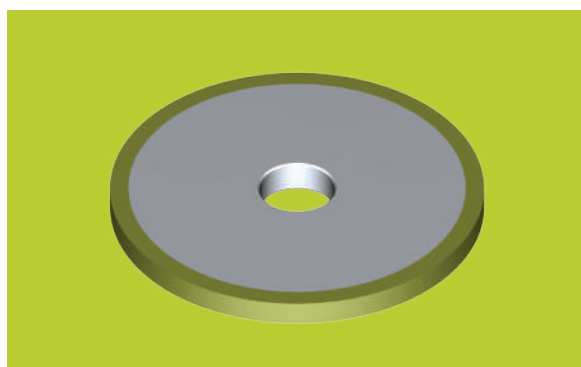
MV

/ on request

V

/ on request

■ 4 A 1



D	U	X	T	H*
25	4	3	6	
30	4	3	6	
40	4	3	6	
50	3 4	3 5	6	
75	2 4 5	3 5	6	
100	2 3 4 5	3 5	6	
125	2 3 4 5	3 5	8	
150	2 3 4 5 6 8	3 5	10	
175	2 3 4 5 6 8 10	3 5	12	
200	2 3 4 5 6 8 10	3 5	15	
250	8 10 12 15	3 5	20	
300	8 10 12 15	3 5	20	
350	10 12 15	3 5	20	
400	10 12 15	3 5	20	
450	12 15	3 5	20	
500	/ on request			
550	/ on request			
600	/ on request			

H* = / specify when ordering

B

/ standard

M

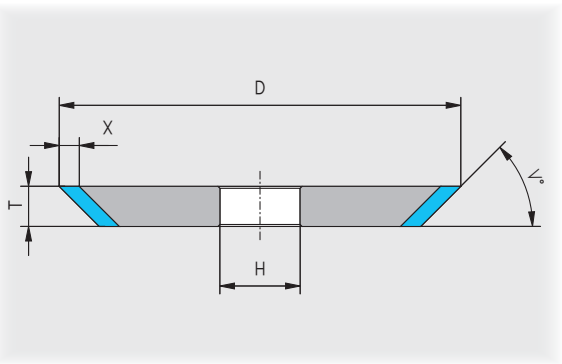
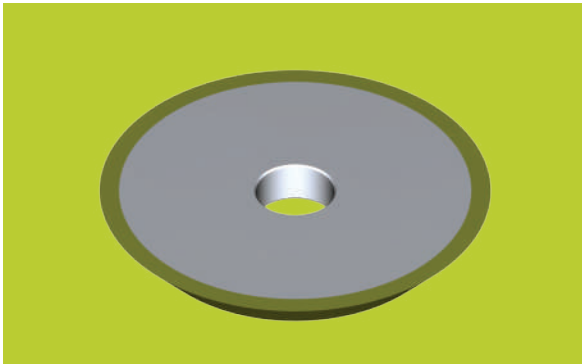
/ standard

MV

/ on request

V

/ on request



D	T	X	V°	H*
75	6 8 10 12 15 20	5	45° 60° 65° 70° 75° 80°	
100	6 8 10 12 15 20	5 8	45° 60° 65° 70° 75° 80°	
125	6 8 10 12 15 20	5 8	45° 60° 65° 70° 75° 80°	
150	6 8 10 12 15 20	5 8	45° 60° 65° 70° 75° 80°	

H* = / specify when ordering

B

/ standard

M

/ standard

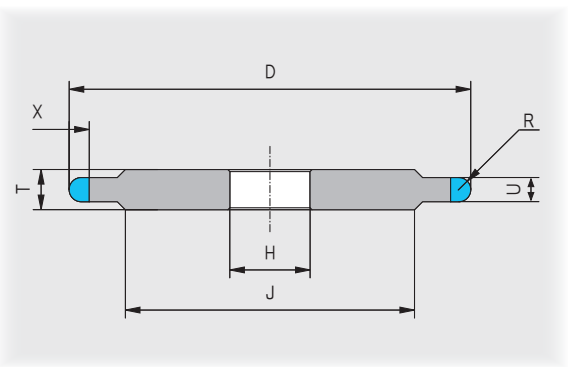
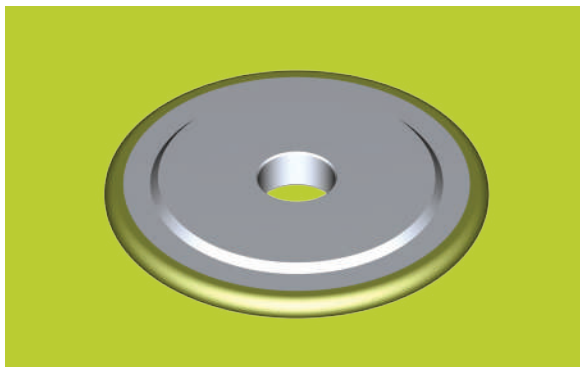
MV

/ on request

V

/ on request

■ 14 F 1



D	U	X	T	J	R	H*
50	2 3 4	3 5	6	30	1 1.5 2	
75	2 3 4	3 5	6	55	1 1.5 2	
100	2 3 4	3 5	6	80	1 1.5 2	
125	2 3 4	3 5	6	105	1 1.5 2	
150	2 3 4	3 5	6	130	1 1.5 2	

H* = / specify when ordering

B
M
MV
V

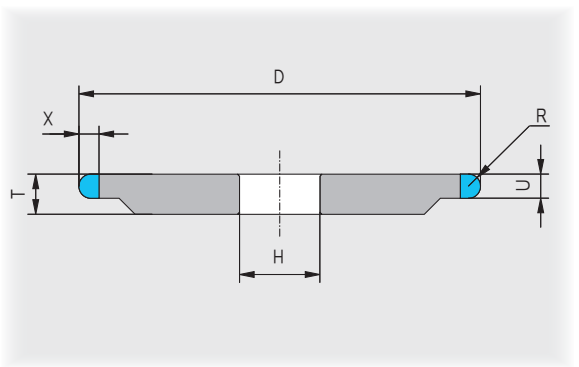
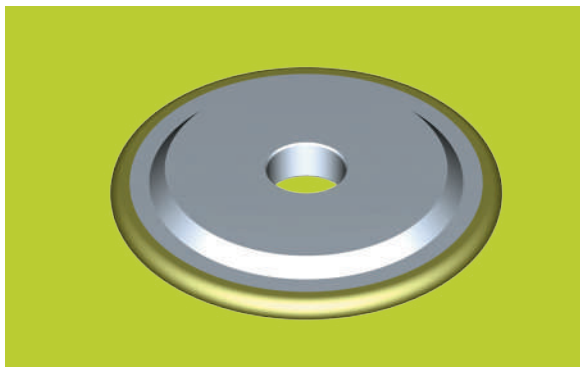
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/ standard

/ on request

/ on request

■ 4 F 1

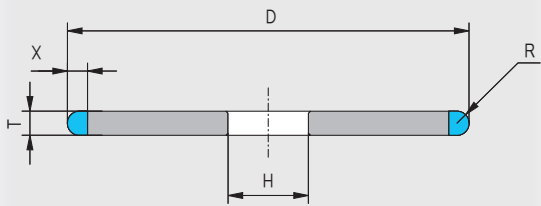
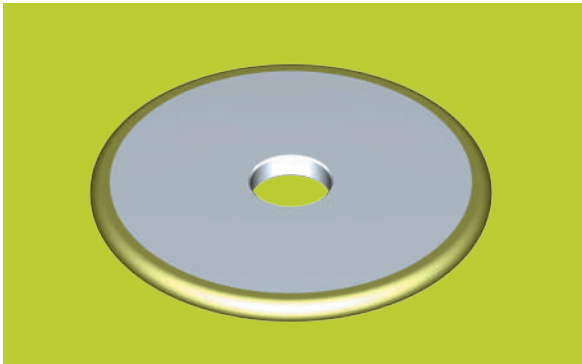


D	U	X	T	R	H*
50	1 1.5	5	6	0.5 0.75	
75	1 1.5	5	6	0.5 0.75	
100	1 1.5	5	6	0.5 0.75	
125	1 1.5	5	6	0.5 0.75	
150	1 1.5	5	6	0.5 0.75	

H* = / specify when ordering

B	/ standard
M	/ standard
MV	/ on request
V	/ on request

■ 1 F 1



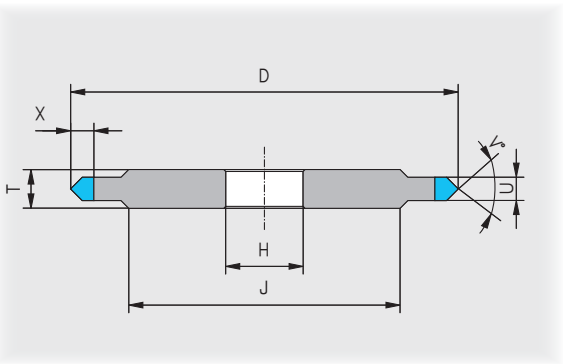
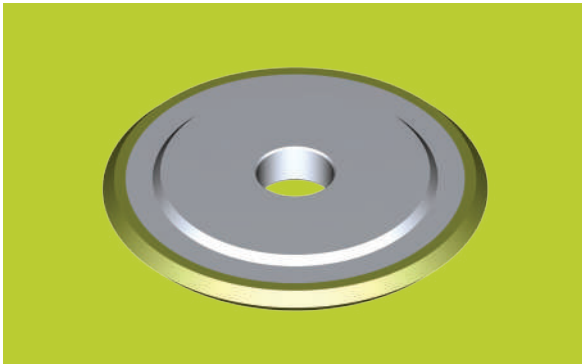
D	T	X	R	H*
50	6 8	5	3 4	
75	6 8	5	3 4	

H* = / specify when ordering

- B
- M
- MV
- V

/ standard
/ standard
/ on request
/ on request

■ 14 E 1



D	U	X	T	J	V°	H*
40	2 3 4	4 5	4 5	26	35° 45° 60° 90°	
50	2 3 4	4 5	4 5	36	35° 45° 60° 90°	
75	2 3 4	5	5	61	35° 45° 60° 90°	
100	2 3 4	5	5	86	35° 45° 60° 90°	
125	2 3 4	5	5	111	35° 45° 60° 90°	
150	2 3 4	5	5	136	35° 45° 60° 90°	
200	2 3 4	5	10	186	35° 45° 60° 90°	

H* = / specify when ordering

- B
- M
- MV
- V

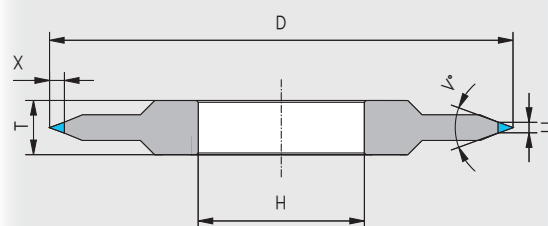
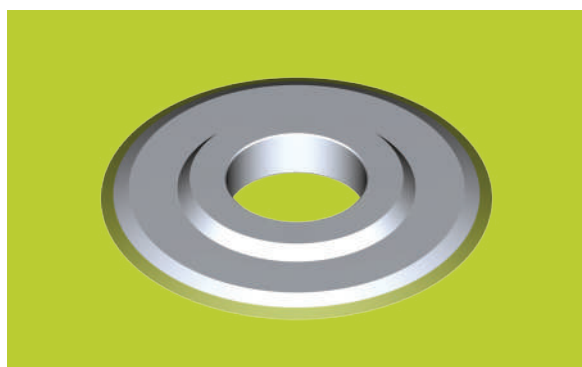
/ standard

/ standard

/ on request

/ on request

■ 14 K 1



D	U	X	T	V°	H*
125	1.58	5	10	18°	
125	2.68	5	10	30°	
150	1.58	5	10	18°	
150	2.68	5	10	30°	
150	2.54	8	10	18°	
150	4.28	8	10	30°	
200	1.58	5	20	18°	
200	2.68	5	10	30°	
200	2.54	8	10	18°	
200	4.28	8	10	30°	

H* = / specify when ordering

B

/ standard

M

/ standard

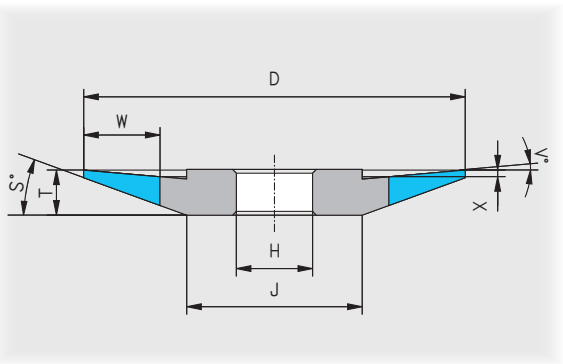
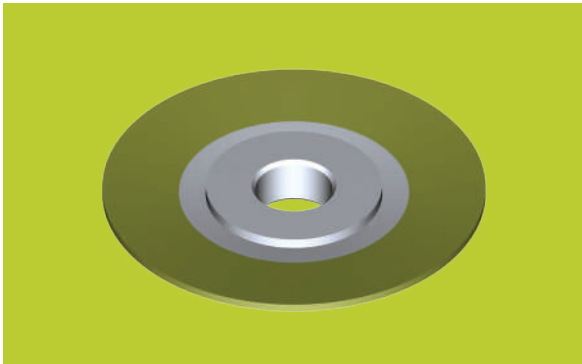
MV

/ on request

V

/ on request

■ 4 BT 9



D	W	X	T	J	V°	S°	H*
60	10	1	8	21	10°	20°	
75	6 10	1	8	34	5°	20°	
100	6 10	1	10	46	5°	20°	
125	6 10	1	12	62	5°	20°	
150	6 10	1	12	87	5°	20°	

H* = / specify when ordering

B

/ standard

M

/ standard

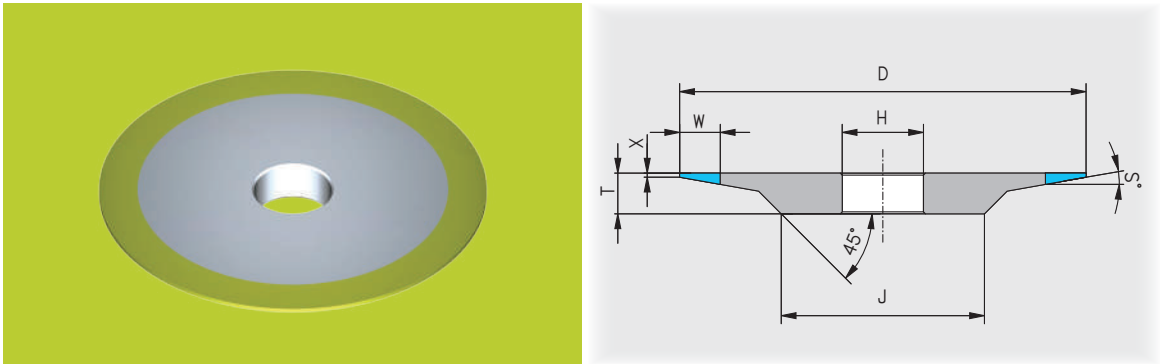
MV

/ on request

V

/ on request

■ 4 B 9



D	W	X	T	J	S°	H*
50	6 10	1	6	25	10°	
75	6 10	1	8	40	10°	
100	6 10	1	8	50	10°	
125	6 10	0.5 1	8	65	10°	
150	6 10	0.5 1	10	80	10°	

H* = / specify when ordering

- B

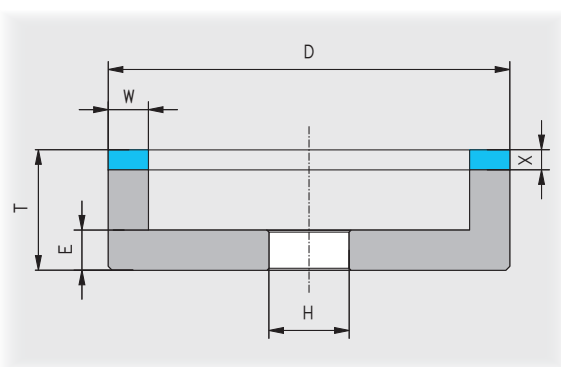
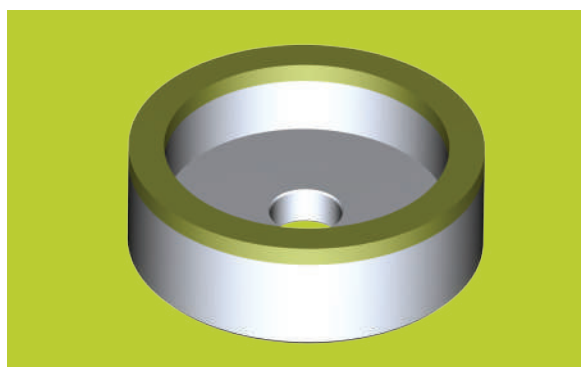
/ standard
- M

/ standard
- MV

/ on request
- V

/ on request

■ 6 A 2



D	W	X	T	E	H*
30	3	4	25	10	
50	3 5	4	22	10	
75	3 5 6 10	3 4	22	10	
100	4 5 6 8 10 15	3 4	22	10	
125	5 6 8 10 15	3 4	25	10	
150	5 6 8 10 15 20 25	3 4	25	10	
175	6 8 10 15 20 25	3 4	25	13	
200	10 15 20 25	3 4	30	13	
250	8 10 12 16 20	3 4	30	13	

H* = / specify when ordering

B

/ standard

M

/ standard

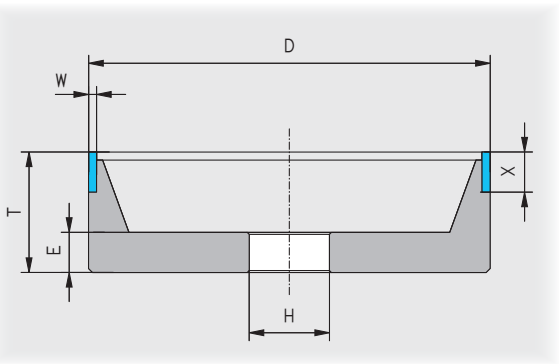
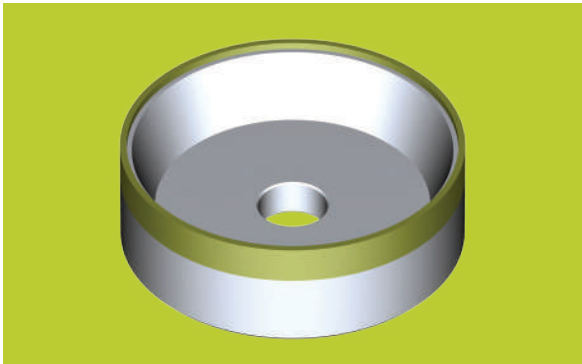
MV

/ on request

V

/ on request

■ 6 A 9



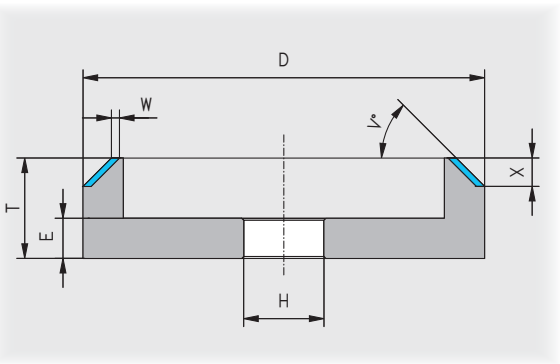
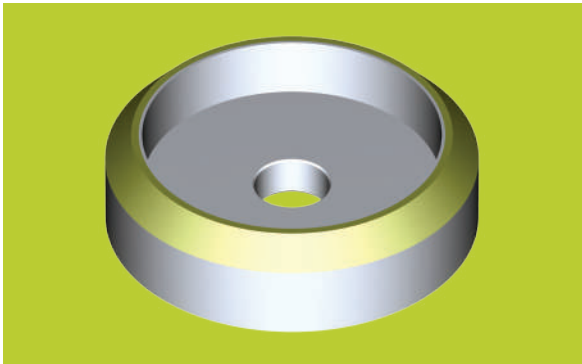
D	W	X	T	E	H*
75	2 3	6 10	25	10	
100	2 3	6 10	30	10	
125	2 3	6 10	30	10	
150	2 3	6 10	35	10	

H* = / specify when ordering

- B
- M
- MV
- V

/ standard
/ standard
/ on request
/ on request

■ 6 V 5



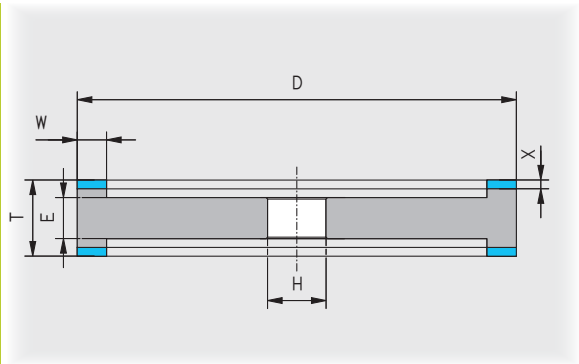
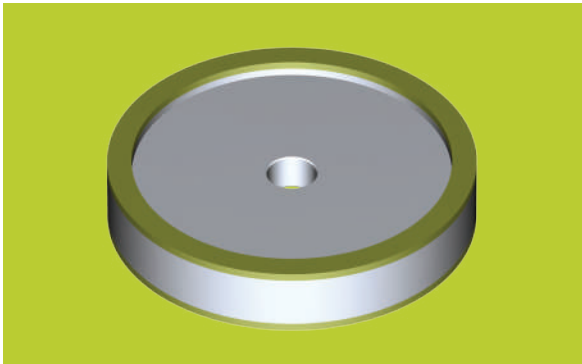
D	W	X	T	E	V°	H*
75	2	6	25	10	30° 45°	
100	2	6	30	10	30° 45°	
125	2	6	30	10	30° 45°	

H* = / specify when ordering

- B
- M
- MV
- V

/ standard
/ standard
/ on request
/ on request

■ 9 A 3



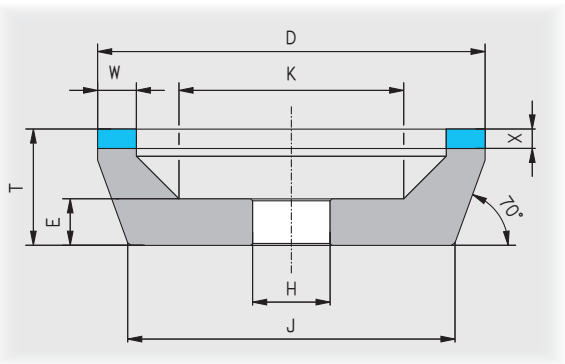
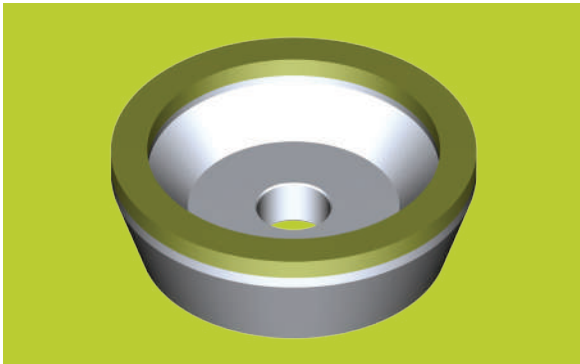
D	W	X	T	E	H*
100	5 6	2 3	22	10	
125	5 6	2 3	22	10	
150	4 6 8	2 3	25 35	14	
175	4 6 8	2 3	25 35	14	
200	6 8	2 3	30	20	

H* = / specify when ordering

- B
- M
- MV
- V

/ standard
/ standard
/ on request
/ on request

■ 11 A 2



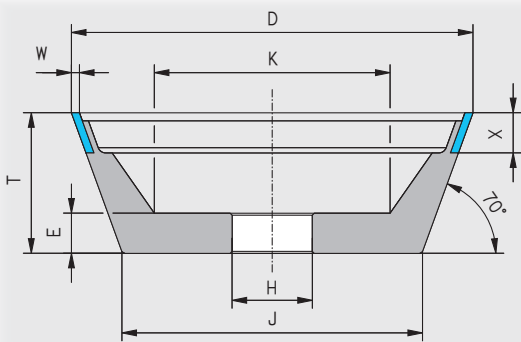
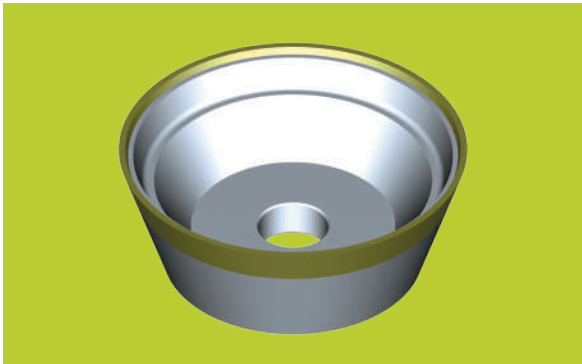
D	W	X	T	E	K	J	H*
50	3 5	3 4	22	10	30	38	
75	3 5 6 10	3 4	22	10	48	63	
100	6 8 10	3 4	22	10	70	88	
125	6 8 10	3 4	25	10	98	110	
150	6 8 10	3 4	25	10	123	135	

H* = / specify when ordering

B
M
MV
V

/ standard
/ standard
/ on request
/ on request

■ 11 V 9



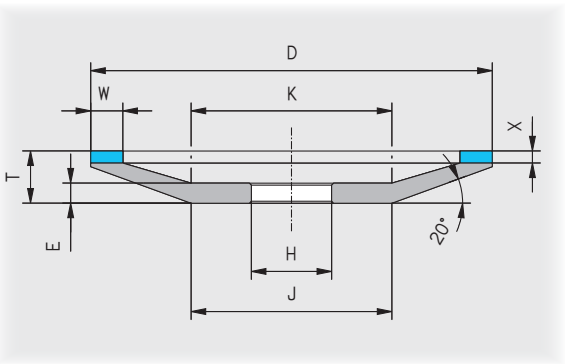
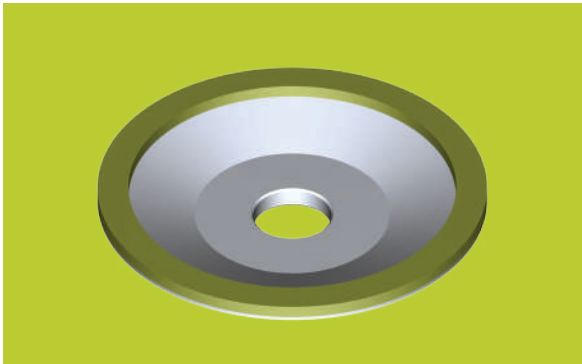
D	W	X	T	E	K	J	H*
50	2	6	25	10	18	31	
75	2 3	6 10	30	10	42	53	
100	2 3	6 10	35	10	55	75	
125	2 3	6 10	40	10	75	96	
150	2 3	6 10	50	10	90	114	

H* = / specify when ordering

B
M
MV
V

/ standard
/ standard
/ on request
/ on request

■ 12 A 2 20°



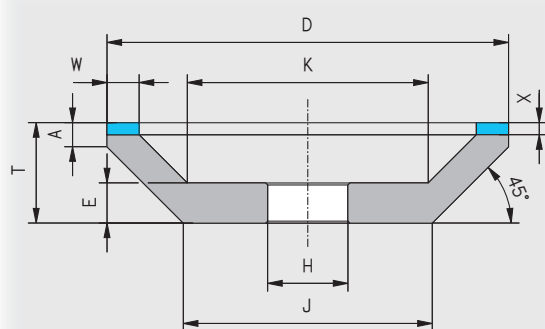
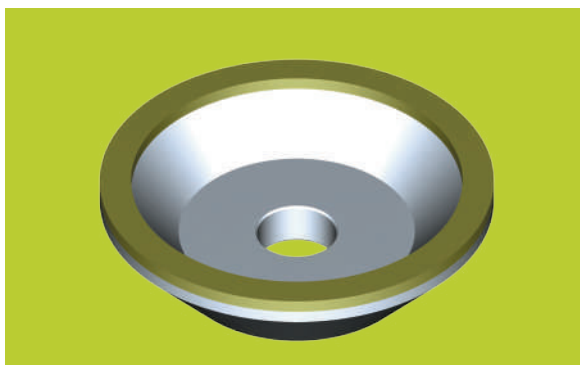
D	W	X	T	E	K	J	H*
50	5	2	8	5	19	22	
75	3 4 5 6	2	10	5	33	36	
100	4 5 6 8	2	12	6	50	50	
125	4 5 6 8 10	2	16	8	53	53	
150	4 5 6 8 10	2	18	9	67	67	
175	5 6 8 10 15	2	20	10	81	81	
200	5 6 8 10 15	2	22	11	95	95	
250	6 8 10 15	2	25	13	129	129	

H* = / specify when ordering

- B
- M
- MV
- V

/ standard
/ standard
/ on request
/ on request

■ 12 A 2 45°



D	W	X	T	E	K	J	A	H*
50	3 4	3 4	20	8	25	22	6	
75	3 5 6 10	3 4	25	10	37	37	6	
100	3 5 6 8 10	3 4	25	10	54	70	10	
125	4 5 6 8 10 15	3 4	25	10	79	95	10	
150	4 5 6 8 10 15 20	3 4	25	12	94	124	12	
175	6 8 10 15 20	3 4	25	12	123	149	12	
200	6 8 10 15 20	3 4	25	12	138	174	12	
250	8 10 15 20	3 4	25	12	188	224	12	

H* = / specify when ordering

B

/ standard

M

/ standard

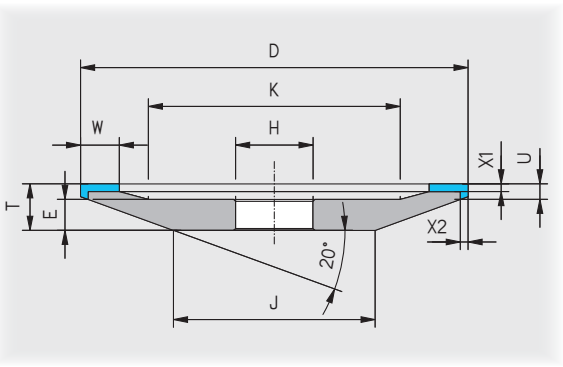
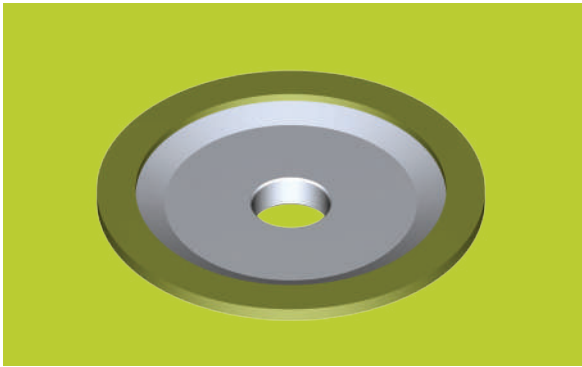
MV

/ on request

V

/ on request

■ 12 C 9 20°



D	W	U	X ₁ / X ₂	T	E	K	J	H*
50	4	4	2	6	4	34	22	
75	5	4	2	8	5	50	42	
100	6	4	2	12	8	65	45	
125	6	4	2	14	10	90	59	
150	6	4	2	15	10	108	78	
175	6	4	2	18	12	125	87	
200	6	4	2	20	12	135	101	

H* = / specify when ordering

B

/ standard

M

/ standard

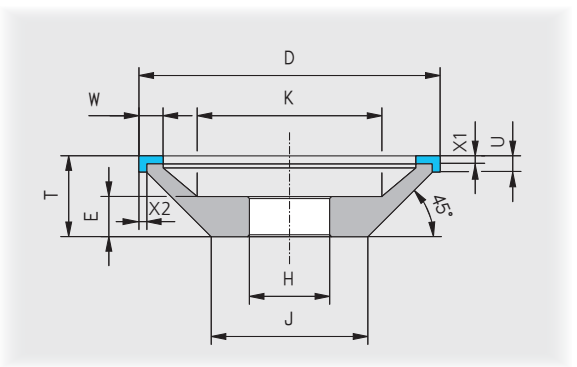
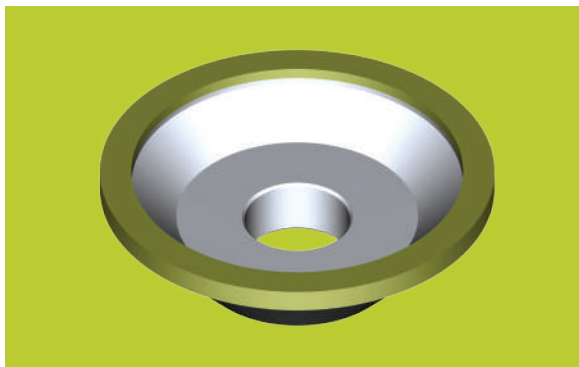
MV

/ on request

V

/ on request

■ 12 C 9 45°



D	W	U	X ₁ /X ₂	T	E	J	H*
75	6	4	2	20	10	39	
100	6 10	4	2	25	10	54	
125	6 10	4	2	25	10	79	

H* = / quote with orde

B

/ standard

M

/ standard

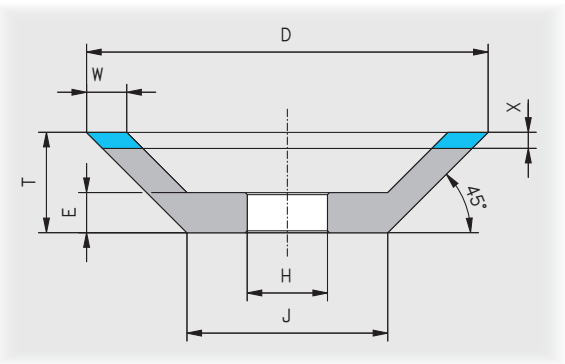
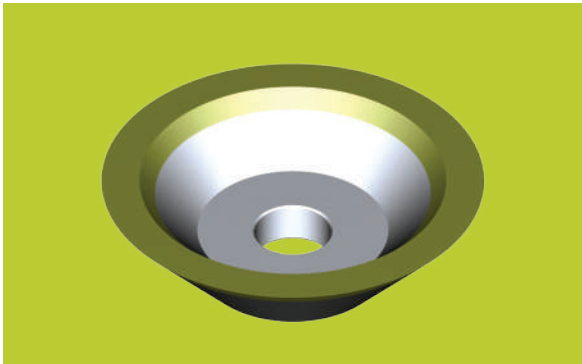
MV

/ on request

V

/ on request

■ 12 V 2 45°



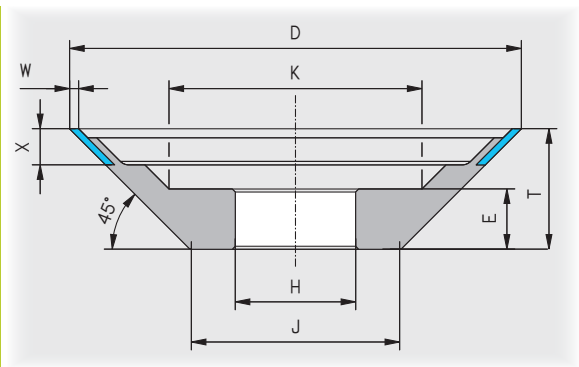
D	W	X	T	E	J	H*
75	5	3 4	20	10	35	
100	6 10	3 4	25	10	50	
125	6 10	3 4	25	10	75	

H* = / specify when ordering

- B
- M
- MV
- V

/ standard
/ standard
/ on request
/ standard

■ 12 V 9 45°



D	W	X	T	E	K	J	H*
50	2 3	6	15	6	20	20	
75	2 3	6	20	10	42	35	
100	2 3	6	20	10	60	60	
125	2 3	6	25	10	70	75	
150	2 3	6	30	10	70	90	

H* = / specify when ordering

B

/ standard

M

/ standard

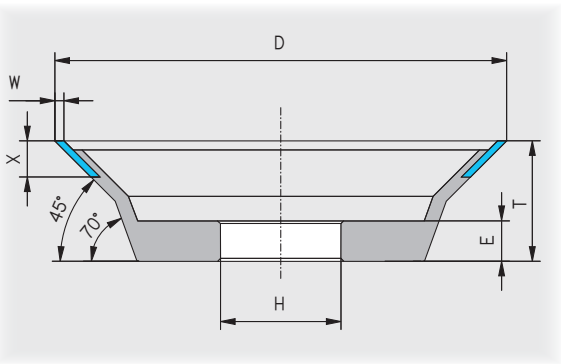
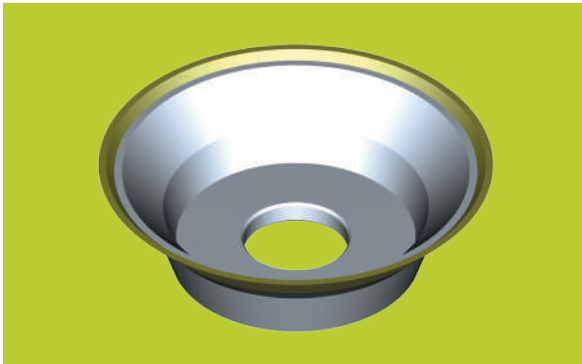
MV

/ on request

V

/ standard

■ 12 V 9 45° | 70°



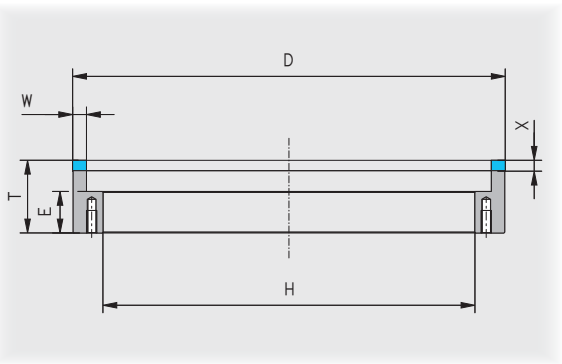
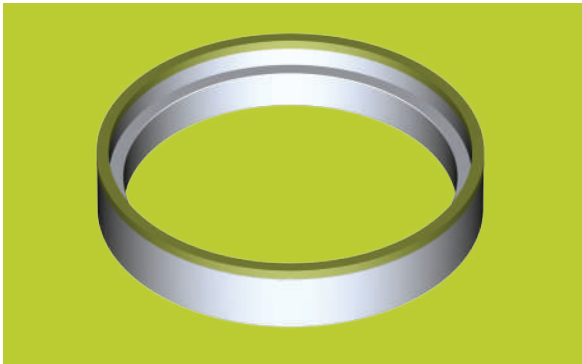
D	W	X	T	E	H*
75	2 3	6	25	7	

H* = / specify when ordering

- B
- M
- MV
- V

/ standard
/ on request
/on request
/ on request

■ 6 A 2 WSP

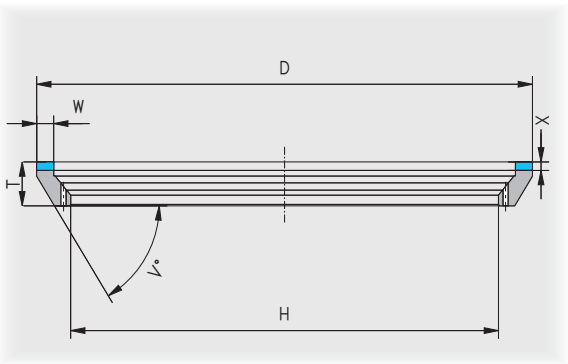


D	W	X	T	H
250	6 8 10 12 16 20	6	42	215

- B
- M
- MV
- V

/ standard
/ on request
/ on request
/ standard

■ 11 A 2 60° | 70° WSP

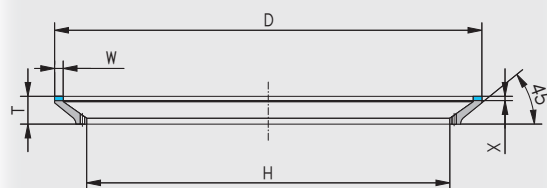


D	W	X	V°
350	6 8 10 12 16 20	4 6	60 70
400	6 8 10 12 16 20	4 6	60 70

Substrate design according to customer-supplied drawing

B	/ standard
M	/ on request
MV	/ on request
V	/ standard

■ 12 A 2 45° WSP



D	W	X
350	6 8 10 12 16 20	4 6
400	6 8 10 12 16 20	4 6

Substrate design according to customer-supplied drawing

B

/ standard

M

/ on request

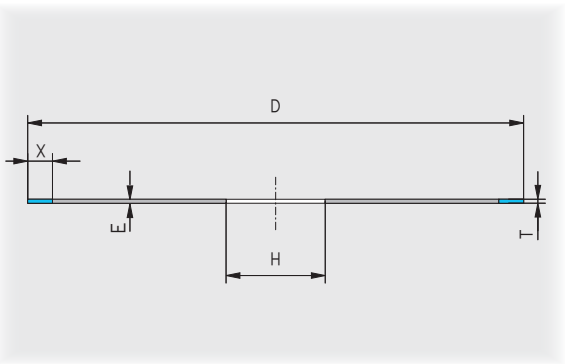
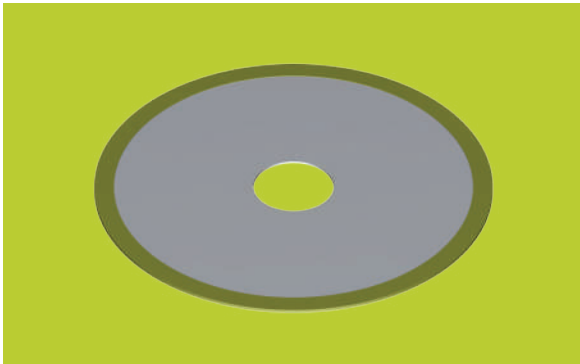
MV

/ on request

V

/ standard

■ 1 A 1 R

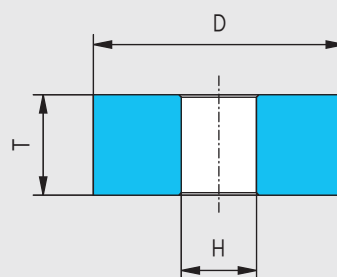
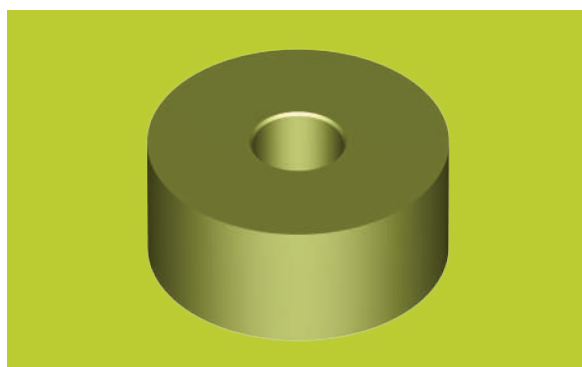


D	T	X	E	H*
30	0.4	5	0.3	
40	0.4	5	0.3	
50	0.4	5	0.3	
75	0.8	5	0.5	
100	0.8	5	0.5	
125	1.1	5	0.8	
150	1.2	5 7	0.9	
175	1.2	5 7	0.9	
200	1.2	5 7	0.9	
250	1.5	5 7	1.1	
300	1.8	5 7	1.4	

H* = / specify when ordering

B	/ standard
M	/ on request
MV	/ on request
V	/ on request

■ 1 A 8



D	T	H
10	4 6 8 10	3 4
11	4 6 8 10	3 4
12	4 6 8 10	6
13	4 6 8 10	6
14	4 6 8 10	6
15	4 6 8 10	6 8
16	4 6 8 10	6 8
18	4 6 8 10	6 8 10
20	4 6 8 10	6 8 10

B

/ standard

M

/ standard

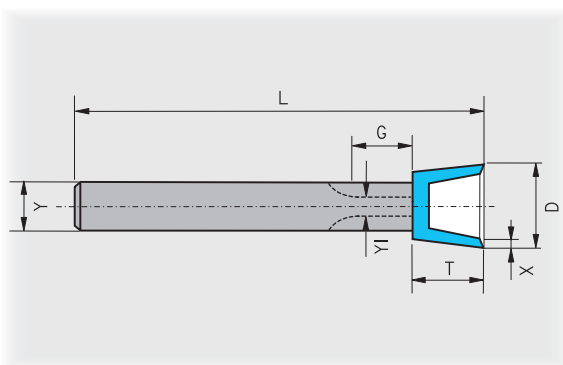
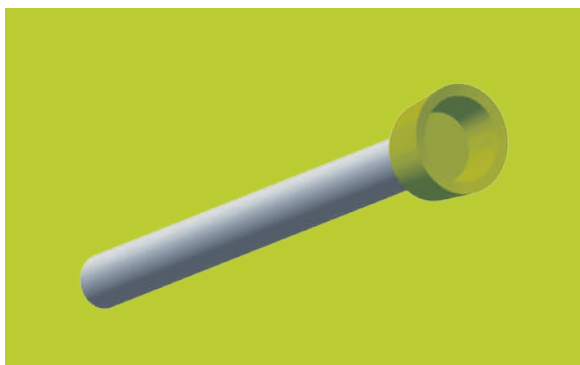
MV

/ on request

V

/ on request

■ 1 B 1 W



D	T	X	Y	Y1	L	G
4	6	1.0	3		40	
5	6	1.0	6	3.7	80	6
6	7	1.3	6	4.7	80	7
8	7	1.3	6		80	
10	7	1.3	8		80	
12	7	1.5	8		80	
15	7	1.5	8		80	
20	7	1.5	10		80	

B

/ standard

M

/ standard

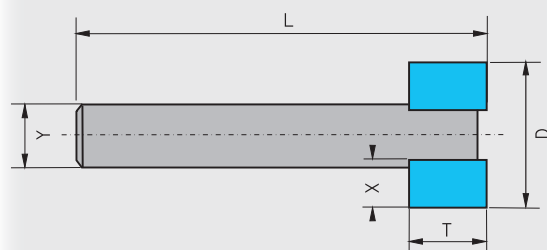
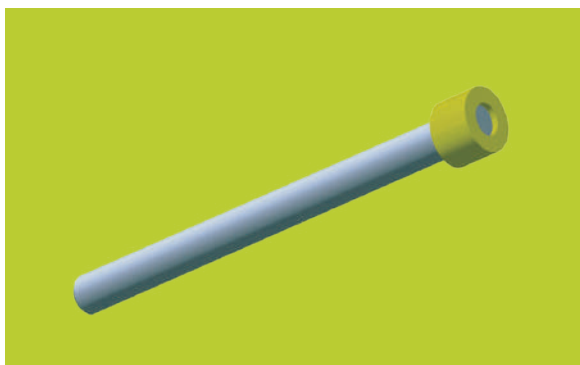
MV

/ on request

V

/ on request

■ 1 A 1 W



D	T	X	Y	L
2.0	4	0.55	3	31
3.0	4.5	0.75	3	50
4.0	4 5	1.10	3	50
5.0	5 6	1.50	3	50
6.0	5 7	1.50	4	50
8.0	7	2.00	6	60 80
10.0	7	2.50	6	80
12.0	7	2.00	8	80
15.0	7	2.00	10	80

B

/ standard

M

/ standard

MV

/ on request

V

/ on request



/ Sonder-Schleifwerkzeuge / Special grinding tools

5

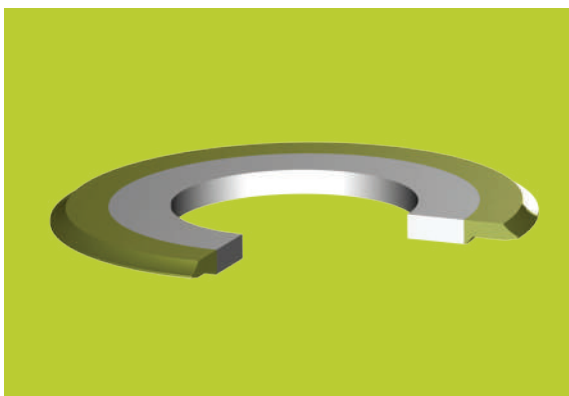
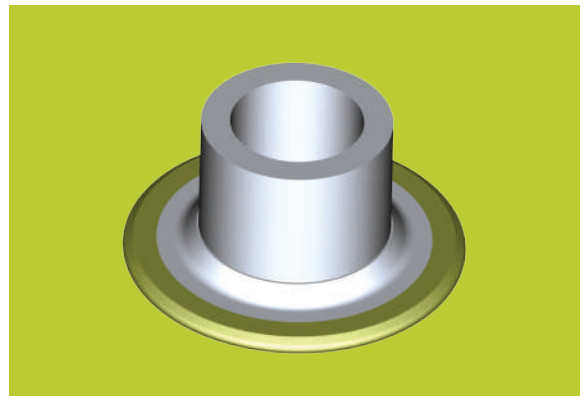
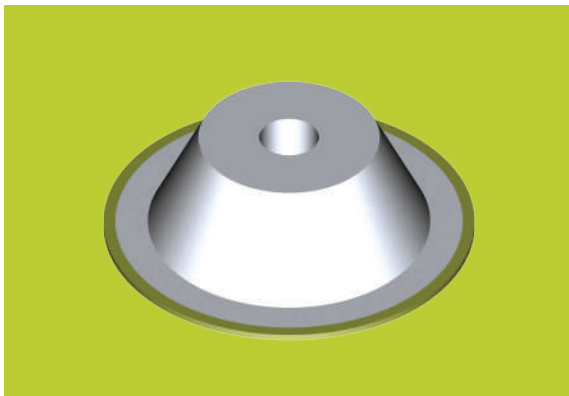
3

가

Many of the DIAMETAL grinding wheels are custom-made.

In our many years in the business, we have satisfied innumerable specific customer demands. Thanks to our flexibility, we respond within 3 to 5 weeks and make the grinding wheels to your drawings or specifications. Our experienced and competent technicians offer you their advice and support in choosing and designing "your" grinding wheel.

A small selection of special grinding tools made by DIAMETAL is shown below.



Questionnaire

☐ CBN

Customer _____

Date _____

Material	Material type, description		Hardness HRc	
	Workpiece description			
	Dimensions			
가 Machining	Grinding mode			
	Surface to be machined			
가 Machine	Make, model			
	Spindelspeed	max.	variable	
	Drive power			
	Coolant, type		pressure	bar
Feed		hydraulic	mechanical	

Wheel specifications		pre.	new	Outline drawing
Manufacturer				
Wheel type				
Diameter	mm			
Rim	mm x mm			
Bore	Ø mm			
Grit size				
Concentration				
Bond				
Wheel No.				

Conditions in use		pre.	new
Required material removal	mm		
Pregrounding	mm		
Finish grinding	mm		
Spindle speed	t/min(rpm)		
Peripheral speed [Vs]	m/sec		
Work., rotary speed	t/min(rpm)		
Table speed [Vt]	m/min		
Infeed [ae]	mm/pass		
가 Transverse feed	mm/stroke		
Qw= time-machining volume	cm³/min		
Qw'= specific time-mach. volume	mm³/mm/s		
Surface quality	[Ra] µm		

Notes, requested modifications, special features:



Production range



CBN ()
Bonded precision grinding tools in Diamond and CBN



CBN ()
Electroplated precision grinding tools in Diamond and CBN



(-)
Top & Bottom - precision grinding wheels



Precision solid carbide gear cutting tools



Precision turning tools



Precision end mills



Hochveredelte Präzisions-Hartstoffteile
Superhard precision parts

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